

PATENT  
Atty. Dkt. No. 2685/5434 (2000-0093)

REMARKS

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In view of the above amendment and the following discussion, the Applicant submits that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicant believes that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-35 UNDER 35 U.S.C. § 103

A. Claims 1-9, 11-12, 14-21, 23-29 and 31

The Examiner rejected claims 1-9, 11-12, 14-21, 23-29 and 31 as being unpatentable over Tingley, et al. (US Publication 2002/0138628, Published September 26, 2002, hereinafter referred to as "Tingley") in view of Berlovitch, et al. (US Patent No. 6,061,334, issued on , hereinafter referred to as "Berlovitch"). The rejection is respectfully traversed.

Tingley teaches an extension of address resolution protocol (ARP) for internet protocol (IP) virtual networks. A bridge or switch forwards data packets received from sets of servers to a Virtual Network within a core network or vice versa. (See Tingley, paragraphs [0042] and [0044].)

Berlovitch teaches an apparatus and method for assigning virtual LANS to a switched network. Berlovitch teaches a virtual network server that automates the previously manually performed steps of detecting any physical or logical changes (e.g. detecting a mismatch between the network address of an end-station and a VLAN to which the port to which the end-station is connected belongs) in a network and then updating VLAN assignments for each and every physical and logical change detected. (See Berlovitch, col. 4, ll. 26-34; col. 25, ll. 1-67.)

The Examiner's attention is directed to the fact that Tingley and Berlovitch, alone or in any permissible combination, fail to teach or suggest the novel concept of a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports

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and said switch, as positively claimed by Applicant's amended independent claim 1. Specifically, Applicant's independent claim 1 positively recites:

1. A system for exchanging information on a network, comprising:  
a switch coupled to a plurality of ports;  
an address table;  
a transient computer having an address, said transient computer coupled to one of said plurality of ports; and  
a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports connected to said transient computer by said switch according to said address table, wherein said transient computer communicates with said one of said plurality of private networks via said one of said plurality of ports and said switch. (Emphasis added.)

Applicant's amended independent claims 9, 17, 20, 23, 25 and 28 include similar limitations. In an exemplary embodiment, the Applicant's invention teaches a method or system for exchanging information on a network comprising a transient computer coupled to one of said plurality of ports and a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports connected to said computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch. For example, a plurality of ports can be in different rooms or physical locations within a house or office. When a PC is connected to one of the ports, a virtual private network, also identified as virtual local area networks (VLAN), is dynamically assigned to this port by a switch based upon the MAC address of the PC. (e.g., See Applicant's specification, pg. 5, l. 26 – pg. 6, l. 13.) The switch uses an address table to assign the appropriate virtual private network to the port connected to the transient PC. (e.g., See Applicant's specification, pg. 6, ll. 14-29.) Consequently, the transient PC may be connected to any one of the plurality of ports and the switch will assign the correct virtual private network to the PC regardless of which port the transient PC is connected to. (See *Id.*)

In contrast, the alleged combination (as taught by Tingley) fails to teach, show or suggest a method or system for exchanging information on a network comprising a transient computer coupled to one of said plurality of ports. For example, the

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Applicant's invention teaches that a plurality of ports may be in different physical locations. (e.g., See Applicant's specification, pg. 7, ll. 4-5.) Furthermore, the Applicant's invention teaches that a user of a PC may disconnect the PC from one port and re-connect to a different port. (e.g., See Applicant's specification, pg. 8, ll. 24-27.) Consequently, the computer is transient and the switch dynamically assigns one of the plurality of private networks to the one of said plurality of ports connected to the transient computer.

Nowhere in Tingley does it teach or suggest that any of the servers, which the Examiner alleges reads on the limitation of a computer as recited by the Applicant's invention, can be disconnected from their specific Ethernet link and reconnected to another specific Ethernet link. In fact Tingley teaches away from Applicant's invention. For example, Tingley states that:

Since each of the Ethernet links 68, 70 and 72 are connected only to servers associated with a given Virtual Network, the Ethernet links 68, 70 and 72 are each Virtual Network specific, in that packets carried over a given one of the Ethernet links 68, 70 and 72 are only seen by one of the sets of servers 74, 76 and 78. (Tingley, Paragraph 0044, emphasis added.)

Clearly, Tingley states that each link is virtual network specific and as such these links and their associated ports can never be dynamically assigned. In other words, moving one of Tingley's server to another Ethernet link will not allow the moved server to communicate with its corresponding virtual network. Therefore, unlike the Applicant's invention that teaches a transient computer coupled to one of said plurality of ports such that one of a plurality of private networks can be dynamically assigned to said one of said plurality of ports, Tingley only teaches the use of static servers such that there is absolutely no teaching that one of a plurality of private networks can be dynamically assigned to one of a plurality of ports.

However, the Examiner then asserts that Berlovitch bridges the substantial gap left by Tingley. Berlovitch fails to bridge the substantial gap left by Tingley because Berlovitch fails to teach or to suggest a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in

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response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch.

Berlovitch teaches that typically "each port needs to be assigned to a specific VLAN". (See Berlovitch, col. 25, ll. 4-5, emphasis added.) As such, since each port is assigned to a particular VLAN, Berlovitch teaches that when a mismatch is detected between the network address of an end-station and a VLAN, then a new VLAN is assigned. (See Berlovitch, Column 4, lines 27-34) Thus, Belovitch is required to detect a mismatch before a new VLAN can be assigned. In other words, Belovitch is not capable of performing dynamic assignment, e.g., where there is no mismatch.

In contrast, the Applicant's invention teaches a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch. Unlike, the Applicant's invention, Berlovitch teaches that VLAN assignments must be assigned according to rules ensuring optimal assignment of VLANs and only after detecting a mismatch.

Moreover, Applicant's invention teaches that any one of said plurality of private networks may be dynamically assigned to any one of said plurality of ports connected to a transient computer. In contrast, Berlovitch teaches that some VLANs assigned to some ports may not be compatible with a connected end-station (i.e. a mismatch problem is detected). (See Berlovitch, col. 4, ll. 26-34; col. 36, ll. 54-59.) Therefore, the combination of Tingley and Berlovitch clearly fails to render obvious the Applicant's independent claim 1 and independent claims 9, 17, 20, 23, 25 and 28 containing similar limitations.

Furthermore, dependent claims 2-8, 11, 12, 14-16, 18-19, 21, 24, 26, 27, 29 and 31 depend, either directly or indirectly, from claims 1, 9, 17, 20, 23, 25 and 28 and recite additional limitations. As such, and for the exact same reason set forth above, the Applicant submits that claims 2-8, 11, 12, 14-16, 18-19, 21, 24, 26, 27, 29 and 31 are also patentable over Tingley in view of Berlovitch. As such, the Applicant respectfully

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requests the rejection be withdrawn.

B. Claims 10, 13 and 30

The Examiner rejected claims 10, 13 and 30 as being unpatentable over Tingley and Berlovitch in view of Miner, et al. (US Patent 6,804,332, issued October 12, 2004, hereinafter referred to as "Miner"). The rejection is respectfully traversed.

The teachings of Tingley and Berlovitch are discussed above. Miner teaches a network based knowledgeable assistant. Miner teaches a computer-implemented method of processing communications through a multimedia interface that includes a plurality of interface devices and a plurality of input/output devices. (See Miner, Abstract.)

The Examiner's attention is directed to the fact that Tingley, Berlovitch and Miner, alone or in any permissible combination, fail to teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch, as positively claimed by Applicant's independent claims 9 and 28. (See *supra*.)

As discussed above, Tingley and Berlovitch clearly do not teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch. Moreover, Miner fails to bridge the substantial gap left by Tingley and Berlovitch. Miner only teaches a computer-implemented method of processing communications through a multimedia interface that includes a plurality of interface devices and a plurality of input/output devices. (See Miner, Abstract.) As such, the combination of Tingley, Berlovitch and Miner does not teach, show or suggest Applicant's invention as recited in independent claims 9 and 28.

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Dependent claims 10, 13 and 30 depend from independent claims 9 and 28 and recite additional limitations. As such, and for the exact same reasons set forth above, the Applicant submits that claims 10, 13 and 30 are also not made obvious by the combination of Tingley, Berlovitch and Miner. Therefore, the Applicant respectfully requests the rejection be withdrawn.

C. Claim 22

The Examiner rejected claim 22 as being unpatentable over Tingley and Berlovitch in view of Thornton, et al. (US Patent 6,363,065, issued March 26, 2002, hereinafter referred to as "Thornton"). The rejection is respectfully traversed.

The teachings of Tingley and Berlovitch are discussed above. Thornton teaches an OK apparatus for a voice over IP (VoIP) telephony gateway and methods for use therein. The apparatus embeds, using call independent signaling, certain call-specific information, as non-standard data, within various conventional H.323 messages that transit between paired gateways. (See Thornton, Abstract.)

The Examiner's attention is directed to the fact that Tingley, Berlovitch and Thornton, alone or in any permissible combination, fail to teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch, as positively claimed by Applicant's independent claim 20. (See *supra*.)

As discussed above, Tingley and Berlovitch clearly do not teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks, wherein one of said plurality of private networks is dynamically assigned to said one of said plurality of ports in response to a detected connection to said transient computer by said switch according to said address table, wherein said computer communicates with said private network via said one of said plurality of ports and said switch. Moreover, Thornton fails to bridge the substantial gap

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left by Tingley. Thornton only teaches an OK apparatus for a voice over IP (VoIP) telephony gateway that embeds, using call independent signaling, certain call-specific information, as non-standard data, within various conventional H.323 messages that transit between paired gateways. (See Thornton, Abstract.) As such, the combination of Tingley, Berlovitch and Thornton does not teach, show or suggest Applicant's invention as recited in independent claim 20.

Dependent claim 22 depends from independent claim 20 and recites additional limitations. As such, and for the exact same reasons set forth above, the Applicant submits that claim 22 is also not made obvious by the combination of Tingley, Berlovitch and Thornton. Therefore, the Applicant respectfully requests the rejection be withdrawn.

D. Claims 32-35

The Examiner rejected claims 32-35 as being unpatentable over Tingley and Berlovitch in view of Fluss (US Patent 6,304,578, issued October 16, 2001, hereinafter referred to as "Fluss"). The rejection is respectfully traversed.

The teachings of Tingley and Berlovitch are discussed above. Fluss teaches packet routing and queuing at the headend of shared data channel. A headend of a shared data channel receives data packets, each data packet being addressed to a user of the shared data channel. A buffer of the headend queues the data packets, and a router of the headend assigns high transmittal priority to data packets addressed to users who have more recently received a previous data packet and assigns low transmittal priority to data packets addressed to users who have relatively less recently received a previous data packet, wherein the low transmittal priority is a lower priority than the high transmittal priority. (See Fluss, Abstract.)

The Examiner's attention is directed to the fact that Tingley, Berlovitch and Fluss, alone or in any permissible combination, fail to teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks comprising a plurality of virtual local area networks created by said switch, wherein one of said plurality of virtual local area networks is dynamically assigned to a port of said plurality of ports according to an address in said address table in response

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to a detected connection to a transient computer, said transient computer coupled to said port, said transient computer including said address correlating to said one of said plurality of virtual local area networks, as positively claimed by Applicant's independent claim 32. Applicant's independent claim 32 positively recites:

32. A system for exchanging information from a plurality of ports to external private networks, comprising:

    a switch coupled to said plurality of ports, said switch including an address table;

a plurality of virtual local area networks created by said switch, wherein one of said plurality of virtual local area networks is dynamically assigned to a port of said plurality of ports according to an address in said address table in response to a detected connection to a transient computer, said transient computer coupled to said port, said transient computer including said address correlating to said one of said plurality of virtual local area networks; and

    a modem coupled to said switch via an Ethernet hub, said modem to exchange information from said one of said plurality of virtual local area networks assigned to said port to an external virtual private network corresponding to said transient computer. (Emphasis added.)

In an exemplary embodiment, the Applicant's invention teaches a method or system for exchanging information on a network comprising a plurality of private networks comprising a plurality of virtual local area networks created by said switch, wherein one of said plurality of virtual local area networks is dynamically assigned to a port of said plurality of ports according to an address in said address table in response to a detected connection to a transient computer, said transient computer coupled to said port, said transient computer including said address correlating to said one of said plurality of virtual local area networks. For example, a plurality of ports can be in different rooms or physical locations within a house or office. When a transient PC is connected to one of the ports, a virtual private network, also referred to as virtual local area networks, is assigned to this port by a switch based upon the MAC address of the transient PC. (e.g., See Applicant's specification, pg. 5, I. 26 – pg. 6, I. 13.) The switch uses an address table to assign the appropriate virtual private network to the port connected to the PC. (e.g., See Applicant's specification, pg. 6, II. 14-29.) Consequently, the PC may be connected to any port and the switch will assign the correct virtual private network to the PC regardless of which port the PC is connected

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to. (See *Id.*)

As discussed above, in contrast, Tingley and Berlovitch fail to teach, show or suggest a method or system for exchanging information on a network comprising a plurality of private networks comprising a plurality of virtual local area networks created by said switch, wherein one of said plurality of virtual local area networks is dynamically assigned to a port of said plurality of ports according to an address in said address table in response to a detected connection to a transient computer, said transient computer coupled to said port, said transient computer including said address correlating to said one of said plurality of virtual local area networks. For example, the Applicant's invention teaches that a plurality of ports may be in different physical locations. (e.g., See Applicant's specification, pg. 7, ll. 4-5.) Furthermore, the Applicant's invention teaches that a user of a PC may disconnect the PC from one port and re-connect to a different port. (e.g., See Applicant's specification, pg. 8, ll. 24-27.) Consequently, the computer is transient and the switch dynamically assigns one of the plurality of private networks to the one of said plurality of ports connected to the transient computer in response to a detected connection to the transient computer.

Moreover, Applicant's invention teaches that said dynamic assignment is not constrained to any rules and that any one of said plurality of private networks may be dynamically assigned to any one of said plurality of ports connected to a transient computer. In contrast, Berlovitch teaches that VLAN assignment is constrained to rules to optimize VLAN assignment and detection of a mismatch. In fact, some VLANs assigned to some ports may not even be compatible with connected end-station (i.e. a mismatch problem is detected). (See Berlovitch, col. 4, ll. 26-34; col. 25, l. 55 – col. 26, l. 48; col. 36, ll. 54-59.)

Moreover, Fluss fails to bridge the substantial gap left by Tingley and Berlovitch. Fluss only teaches packet routing and queuing at the headend of shared data channel. (See Fluss, Abstract.) As such, the combination of Tingley, Berlovitch and Fluss does not teach, show or suggest Applicant's invention as recited in independent claim 32.

In addition, dependent claims 33-35 depend from independent claim 32 and recite additional limitations. As such, and for the exact same reasons set forth above, the Applicant submits that claims 33-35 are also not made obvious by the combination

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of Tingley, Berlovitch and Fluss. Therefore, the Applicant respectfully requests the rejection be withdrawn.

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CONCLUSION

Thus, the Applicant submits that all of these claims now fully satisfy the requirements of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully Submitted,



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Patterson & Sheridan, LLP  
595 Shrewsbury Avenue  
Shrewsbury, New Jersey 07702

Kin-Wah Tong, Attorney  
Reg. No. 39,400  
(732) 530-9404